

SPACE SYSTEMS SYMPOSIUM (D1)  
System Engineering Tools, Processes and Training (1) (3)

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MICROSATELLITE SIMULATOR CONCEPTUAL DESIGN FOR SUPPORTING SATELLITE  
DEVELOPMENT IN INDONESIA

**Abstract**

Basically satellite technology is a high cost technology. In addition its development generally takes a long time; it also produces a high risk. As a design is failure, it will influence the overall satellite system, and finally the cost will be higher and schedule is going to be longer.

Some emerging countries as the new player have several limitations in this space sector. The limited budget is an example of these boundaries. One way to overcome is to propose an optimal design concept with low budget for each space mission.

Nowadays satellite simulator is one of the most interesting approaches in how to design satellite with low budget. It will reduce cost of a spacecraft project as the final consequence. The schedule of it will also be shorter as well. This project will highlight the new flexibility of the design concept of the first Indonesian satellite simulator. This simulator subsystem has been built based on the commercial software (S/W); meanwhile its environment part as a new system is produced by existing S/W components. Each subsystem in this simulator is separated by one soft ware, in other words, one S/W is for one subsystem. The communication among of them is done by serial port which can be upgraded. It will be able to model the overall system.

Our first simulator design mainly can be used not only to support various missions, but also can in commercial operating system.